## *REMARKS*

As noted previously, the Applicant appreciates the Examiner's thorough examination of the subject application.

Claims 1-21 are pending in the subject application. Claims 1-21 were rejected in the non-final Office Action mailed 09 January 2008 on various statutory grounds, as described in further detail below. By the present amendment, claims 1-3, 5-6, 14-15, 18, and 21 are amended and claims 19-20 are canceled. No new matter has been added.

Applicant requests reconsideration and further examination of the subject application in light of the foregoing amendments and the following remarks.

### *Claim Rejections – 35 U.S.C. § 102*

Concerning items 2-14 of the Office Action, claims 1, 2, 7, 11, 14-16 and 18-21 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2005/0044434 to Kahle ("Kahle"). Applicant, noting that claims 19-20 are canceled herein, traverses the rejection and requests reconsideration for the following reasons.

Independent claims 1 and 18 have been amended to specifically recite that the computer processor is *"for processing (i) instruction packets comprising a plurality of only control instructions, and (ii) instruction packets comprising a plurality of instructions comprising at least one data processing instruction"*. This amendment is supported by, e.g., page 7, line 29 to page 8, line 11 of the specification as filed. Additionally, independent claims 1 and 18 have been amended to clarify that the first processing channel is a control processing channel and the second processing channel is a data processing channel. Furthermore, independent claims 1 and 18 have been amended to recite that the decode unit comprises decode circuitry configured to decode/decoding *"identification bits of each instruction packet to determine which type (i), (ii), of instruction packet is being decoded"* and control circuitry configured to pass/passing *"the plurality of only control instructions from an instruction packet of type (i) to the control processing channel when the decode*

*circuitry indicates so and to pass the plurality of instructions comprising at least one data processing instruction from an instruction packet of type (ii) to the data processing channel when the decode circuitry indicates so*". This amendment is supported by, e.g., page 8, lines 12 to 20 of the specification as filed.

Additionally, independent claim 1 has been amended to recite that in use the decode unit causes, instructions comprising a plurality of only control instructions to be executed on the control processing channel, and in use the decode unit causes instructions of instruction packets comprising at least one data processing instruction to be executed simultaneously on the data processing channel. Similar amendments have been made to independent claim 21. Claims 19 and 20 have been canceled.

Hence, Applicant submits that patentable differences between the decode unit of the present application and the decode unit of Kahle are set out explicitly in the independent claims of the subject application.

The amended claims are believed to be novel and provide an inventive step over Kahle. This is because Kahle does not disclose a processor for processing (i) instruction packets comprising a plurality of only control instructions, and (ii) instruction packets comprising a plurality of instructions comprising at least one data processing instruction, as recited in the independent claims of the subject application.

The processor disclosed in Kahle cannot process packets of only control instructions. Although this argument has been raised previously, claim 1 is amended herein to specifically recite that the processor is for processing instruction packets comprising a plurality of only control instructions.

Furthermore, the decode unit of Kahle does not have circuitry capable of performing the same determinations and control actions as the decode unit of the present application. Specifically, the decode unit of Kahle is not configured to detect the type of instruction packet based on identification

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bits in each instruction packet. Kahle merely discloses a decode unit capable of decoding instructions to determine whether they are a control instruction or a data instruction. Therefore, the decode unit of Kahle does not comprise decode circuitry configured to decode identification bits of each instruction packet to determine which type (i), (ii), of instruction packet is being decoded.

In addition, the decode unit of Kahle does not comprise control circuitry configured to pass the plurality of only control instructions from an instruction packet of type (i) to the control processing channel when the decode circuitry indicates so and to pass the plurality of instructions comprising at least one data processing instruction from an instruction packet of type (ii) to the data processing channel when the decode circuitry indicates so.

In addition to the foregoing, Applicant notes that no details with regards to the decode unit and processor are disclosed in Kahle. Therefore, it is submitted that it was not known at the date of filing of the subject application to have a computer processor capable of processing several different types of instruction packets with a decode unit of the arrangement disclosed in the subject application.

For at least the foregoing reasons, Kahle fails to teach or suggest each and every limitation as recited in independent claims 1, 18, and 21. Kahle, therefore, is an improper basis for a rejection of claims 1, 2, 7, 11, 14-16 and 18-21 under 35 U.S.C. § 102(b), and Applicant requests that the rejection be withdrawn accordingly.

## *Claim Rejections – 35 U.S.C. § 103*

### Claims 3, 4, and 17

Concerning items 15-19 of the Office Action, claims 3, 4, and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kahle in view of "Unifying FPGAs and SIMD Arrays" by Bolotski et al. ("Bolotski"). Applicant traverses the rejection and request reconsideration for the following reasons.

The deficiencies of Kahle relative to Applicant's amended claims are described above. For

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the rejection the Examiner correctly admits that Kahle fails to "the second processor channel containing a configurable data execution unit." The Examiner then cites Bolotski as allegedly teaching the admitted deficiency of Kahle. Without acceding to the Examiner's contention as to what Bolotski teaches or the propriety of the combination or modification of the teachings of the two references, Bolotski fails to rectify the deficiencies of Kahle relative to independent claim 1, which is the base claim for claims 3, 4, and 17.

Thus, the combination of Kahle and Bolotski (whether the references are considered together or individually) fails to teach or suggest each and every limitation of claims 3, 4, and 17, which are therefore patentable over the references. Kahle and Bolotski therefore form an improper basis for a rejection of claims 3, 4, and 17 under 35 U.S.C. § 103(a) and Applicant asks that the rejection of these claims be removed accordingly.

Claims 5-6

Concerning items 20-22, claims 5-6 were rejected under 35 U.S.C. § 103(a) as being upatentable over Kahle in view of U.S. Patent No. 5,423,051 to Fuller ("Fuller"). Applicant traverses the rejection and asks for reconsideration for the following reasons.

While the Examiner correctly admits for the rejection that Kahle does not teach "the computer processor of claim 1, wherein the first and second processing channels share a load store," the secondary reference, Fuller, fails to rectify the previously noted deficiencies of Kahle relative to amended claim 1, which is the base claim of claims 5-6. For at least this reason, claims 5-6 are patentable over Kahle and Fuller, and Applicant requests that the rejection of the claims be removed accordingly.

Claims 8-10, 12, and 13

Concerning items 23-24, the Examiner rejected claims 8-10, 12, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Kahle. As explained previously regarding the rejection of claim 1 under 35 U.S.C. § 102(e) over Kahle, the Kahle reference fails to teach or suggest each and every

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limitation as recited in amended claim 1, the base claim for claim 8-10, 12, and 13 as amended. Thus, Kahle is an improper basis for a rejection of claims 8-10, 12, and 13 as amended under 35 U.S.C. § 103(a) and Applicant requests withdrawal of the rejection of these claims accordingly.

## *Response to Arguments*

Applicant thanks the Examiner for the comments supplied in the Response to Arguments section of the Office Action. Without acceding to any contentions or characterizations of prior art made therein, Applicant has amended the claims of the subject application to further its prosecution.

## *Conclusion*

In view of the amendments and remarks submitted herein, Applicant respectfully submits that all of the pending claims in the subject application are in condition for allowance, and respectfully requests a Notice of Allowance for the application.
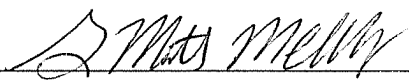
If a telephone conference will expedite prosecution of the application, the Examiner is invited to telephone the undersigned.

Authorization is hereby given to charge our deposit account, No. 50-1133, for the fees corresponding to a Petition for Extension of Time (two months) under 37 CFR § 1.136 and for any other fees required for the prosecution of the subject application.

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Respectfully submitted,

McDERMOTT WILL & EMERY LLP
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